CASE REPORT

Lactating Adenoma - Cytological Dilemma

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ABSTRACT

Lactating adenoma is pathological benign tumor of breast that is frequently associated with pregnancy and lactation. Lactating adenoma needs to be differentiated from other breast masses like galactocele and it can also mimics as carcinoma. History, cytological and histopathological examination helps in diagnosis of the disease. Cyst macrophages, secretory epithelial changes (isolated epithelial cells) and eosinophilic fluid in background is feature of lactating adenoma. Only cyst macrophages and eosinophilic fluid in the background suggest galactocele on cytopathology which is also common in pregnancy and lactation. Here we presented a case of lactating adenoma in 21 year old lactating women, which was diagnosed as galactocele on cytology and later on histopathology turned out as lactating adenoma.

INTRODUCTION

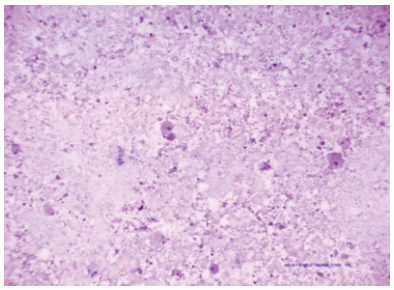
Pregnancy is associated with many physiological and pathological changes in the breast. Lactating adenoma is one of such pathological benign tumor of breast that is frequently associated with pregnancy and lactation[1,2]. They can occur in any trimester but are common in third trimester of pregnancy and lactation. They are common in young primiparous women in the second or third decade[1]. Lactating adenoma needs to be differentiated from other breast masses like galactocele and it can also mimics as carcinoma. History, cytological and histopathological examination helps in diagnosis of the disease.

Here we presented a case of lactating adenoma in 21 year old lactating women.

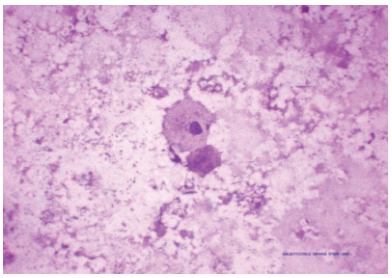
CASE REPORT

A 21 year old lactating female presented with chief complaints of non tender mobile lump measuring 2 x 2 cm palpable in upper outer quadrant of left breast since 2 months. The size of lump was gradually increasing. Patient had taken antibiotic treatment but had no relief.

A provisional diagnosis of galactocele was made by clinical examination and sent for FNAC procedure. On FNAC thin milky white fluid was aspirated. The smears were stained with H and E stain as well as Giemsa stain. On microscopic examination smears shows numerous cyst macrophages in the background of eosinophilic fluid with fat droplets. The diagnosis was given suggestive of galactocele based on these findings. Subsequent excision was done and lump was diagnosed as lactating adenoma on histopathology. Microscopy showed capsulated tumor tissue arranged in tubular and trabecular pattern. Individual cells were hyperplastic epithelial cells showing hyperchromatic nuclei and moderate eosinophilic cytoplasm and intracytoplasmic vacuoles.



A(10x Giemsa stain)



B (40x Giemsa stain)

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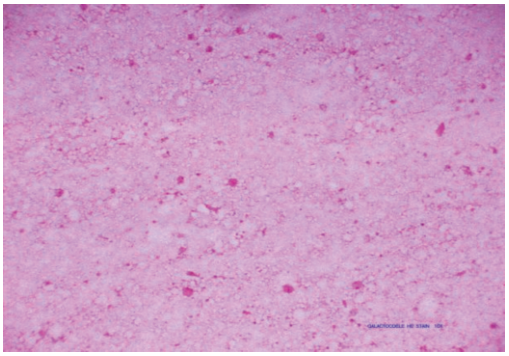
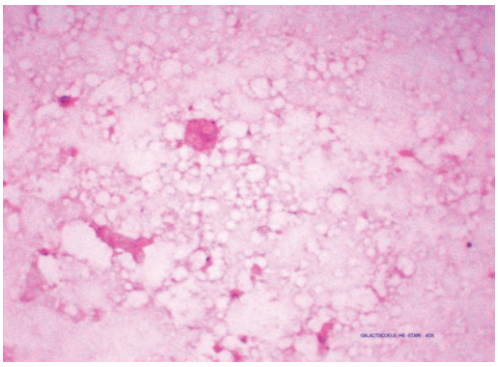


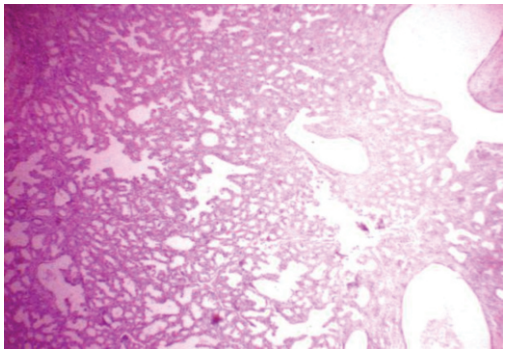
C(10xH&Esatin)



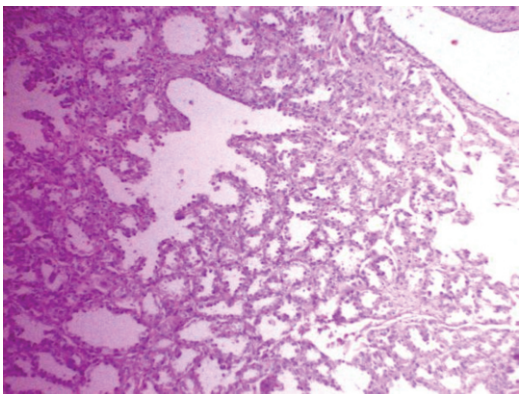
D(40x H&E stain)

Figure 1: A,B, C, D - Fine needle aspiration cytology shows cyst acrophages in background of eosinophilic fluid suggestive of Galactcele

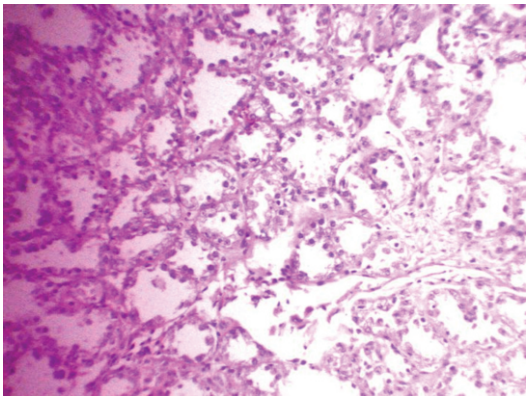
Figure 2: (A,B) Gross picture of lump, cut surface is capsulated and yellow.



A



B



C

Figure 3: (A, B, C) Lactating adenoma 4x, 10x , 40x. (H&E stain)

DISCUSSION

Lactating adenoma is a benign tumor of breast typically occur during lactation or third trimester of pregnancy. It is characterized by typical change of secretory epithelium leading to formation of a well differentiated benign tumor. It is also known as tumor of pregnancy because changes seen in the form of secretion in these regions resemble lactational change of pregnancy[3]. Our case present clinically as galactocele and female was lactating since one year. On FNAC, type of aspirate and cytological features, both lead towards the diagnosis of galactocele. Clinical history and clinical diagnosis also favour our cytological diagnosis. On excision of lump histopathology was done and the case was confirmed as lactating adenoma. Our case was misdiagnosed as galactocele on cytopathology because clinical presentation and aspirate was in favor of galactocele and smears showed cyst macrophages and eosinophilic fluid in background which leads towards the diagnosis of galatocele. Secretory epithelial changes (isolated epithelial cells) were not seen in cytosmear may be due to

needle, not touching the area (limitation of FNAC). Subsequent excision was done and on histopathology diagnosis was lactating adenoma.

Lactating adenoma present duing pregnancy and lactation as galactocele. Cytology with accurate clinical history will help in accurate diagnosis. Definitive diagnosis made by histological examination. Cut surface is lobulated and tan yellow[4,5]. Histopathology shows network of large alveolar spaces separated by fine fibrovascular trabeculae. The trabeculae are lined with typical cuboidal cells containing prominent cytoplasmic vacuoles.

There are two proposed theories about the pathogenesis of lactating adenomas. One suggests that a lactating adenoma is a de novo lesion unique to pregnancy or alternatively lactating adenomas may result from adenomatous or lactational transformation of preexisting lesions, such as fibroadenomas, tubular adenomas, or hamartomas, which undergo lactational changes under hormonal influences[6].

CONCLUSION

Lactational adenoma should be kept in mind when a young pregnant or lactating female present with confusing painless breast lamp that increases rapidly. The histopathology is essential to establish the diagnosis as cytopathology may lead to misdiagnosis as in our case due to same clinical history, same type of aspirate and overlapping features of cytology in galactocele and lactating adenoma.

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